



UK Health
Security
Agency

Changes In the Ventilation Of Schools' (CIVOS)

Stavros Bontitsopoulos ¹, Christopher Brown ², Henry Burridge ¹, Holly Carter ³, Robyn Gautam ⁴, Cath Noakes ², Hershil Patel ⁴, Katherine Roberts ¹, Dale Weston ³, and Natalie Williams ³

1 Imperial College London Department of Civil and Environmental Engineering

2 University of Leeds Department of Civil Engineering

3 UK Health Security Agency Behavioural Science and Insights Unit

4 Department for Education

Background

- ‘Changes In the Ventilation Of Schools’ (CIVOS) is a behavioural science informed pilot study to change ventilation behaviour and management in classrooms
- The study aims to better understand how ventilation training and environmental monitors may allow classroom staff to better balance the needs for adequate ventilation, thermal comfort, and energy consumption.
- 12 months of indoor air quality data was collected from sensors placed in the classrooms of 4 schools
- Survey data was collected to identify existing knowledge, understanding, attitudes, and perceptions relating to ventilation behaviours
- Staff in 2 of the schools (study schools) were provided with a behavioural intervention; training in ventilation practices

Behavioural intervention

- Staff were asked to complete a survey to identify existing knowledge, understanding, attitudes, and perceptions relating to ventilation behaviours
- School staff in 2 schools were provided with a 10 minute training video which detailed:
 - The role of ventilation in reducing COVID-19 transmission
 - The role of CO₂ as a proxy measure for ventilation
 - Where to use CO₂ monitors
 - What CO₂ readings mean
 - What to do to improve ventilation
- The video was made available via the academy's intranet and staff were free to engage with the training any number of times whenever it suited them
- Staff were asked to complete a second survey 2 weeks after training was made available (post-training survey) so that the effects of training on knowledge, understanding, attitudes, and perceptions relating to ventilation behaviours could be analysed

Key findings

- The first survey sent to schools received 52 responses;
 - 73% of staff reported ventilation as "very important" for reducing the spread of COVID-19 in schools
 - 83% would be "willing/very willing" to use CO₂ monitors in their schools' classrooms.
 - 20% of staff reported there being no means of ventilation in classrooms, 32% reported windows only opening a limited amount and 22% said windows do not open at all
- These findings indicate there could be significant barriers to adequate ventilation

Next steps

- The focus group will be carried out to explore CO₂ monitor usage, any barriers to utilising the CO₂ monitors or to ventilating spaces within their buildings